

REMARKS

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the non-final Office Action of July 30, 2004 in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the claims now pending in the subject application have been amended. It is believed that the claims now pending in the application are patentable over the prior art references cited and relied on, taken either singly or in combination. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

As set forth in currently amended claim 33, the subject invention is directed to a method for drawing in paper webs through a longitudinal folding hopper of a rotary printing press. As has been discussed in detail in prior Amendment remarks, a web draw-in procedure is used only during the feeding of a paper web, or a plurality of paper webs into the press. It is analogous to the feeding of a film strip into a movie projector prior to turning the projector on to show the movie. Since the press operators cannot physically grasp the leading end of the plurality of paper webs that are to be drawn into a longitudinal folding hopper, they must rely on such draw-in devices to lead the beginning of the webs through the folding hopper. The plurality of paper webs typically arrive at the folding hopper from a number of printing units, each of which has printed several pages of what typically will be a section of a newspaper. The plurality of paper webs are joined together before the inlet to the folding hopper and are then passed through the hopper.

It is very important that the plurality of webs do not shift, with respect to each

other, as they are drawn through the longitudinal folding hopper. Such shifting would result in a misalignment of the pages printed on one web with respect to the pages printed on another web. The plurality of webs are typically severed transversely after the longitudinal folding to form the desired newspaper sections. It is clearly imperative that each section have its full compliment of pages which are all complete. A shift of one web, with respect to the other webs, would allow such a mis-alignment to occur.

As recited in currently amended claim 33, a plurality of webs are fastened together to form a paper web train before an inlet to the longitudinal folding hopper. The paper webs are fastened together by one of several methods which are discussed in the Substitute Specification at paragraphs 78, 91 and 125-128. The specific method used to join the paper webs together, to form the web train, is not as important as the fact that the web train is formed before the paper web train is drawn into the longitudinal folding device.

After the paper web train has been formed, it is engaged by the paper web draw-in device which cooperates with the longitudinal folding hopper. The draw-in device has paper web holding devices which are used to actually engage the previously formed paper web train. These paper web holding devices are used to secure the previously fastened-together paper web train to the paper web draw-in device before the fastened-together paper web train arrives at the longitudinal folding hopper inlet.

The draw-in device operates to draw or to feed the fastened together paper web train through the folding hopper. As was discussed above, the draw-in device is used only when the paper web train is being initially fed through the longitudinal folding device, or if there has been a paper web break and a resultant stoppage of the press.

Once the paper web has been drawn through the longitudinal folding hopper, it is necessary to disconnect the paper web holding devices of the paper draw-in device from the fastened together paper web train. As soon as the printing press is put into a production mode of operation, the paper web train will be drawn through the folding hopper by the action of further press equipment, such as folding rollers and the like. It is very important that the paper web train is disconnected from the draw-in device and that the draw-in device paper web holding devices are moved out of contact with the fastened together paper web train before the press starts to operate in its production mode. If this disconnection did not occur, the paper web train would be ripped and the web draw-in device would be damaged. During the operation of the web-fed rotary printing press, the paper web draw-in device is moved out of the paper web travel path.

Claim 33, as presented in the Amendment After Final Rejection, was rejected, in the Office Action of July 30, 2004, under 35 USC 103(a) as being unpatentable over CH 342 241 to Sillen in view of DE 7754179 to Pflaum. It was asserted that Sillen discloses a method for drawing paper webs through a longitudinal folding device. Pflaum was cited as showing a conventional folding hopper. It was further asserted that while Sillen shows the use of the draw-in device holding elements as joining the individual paper webs to each other to form a fastened together paper web train, that it would be obvious to have an additional fastening device for fastening the paper webs into a paper train. Such a device could assertedly be an electrostatic charge used to fasten the edges of the webs together to avoid wrinkling of the free edges prior to entry into the longitudinal folding device in the device of Sillen, as suggested by Pflaum at its English translation at page 12.

The undersigned has carefully reviewed the two cited references relied on by the Examiner in the rejection of claim 33. In response, claim 33 has again been amended to even further define the subject method over the references cited and relied on. It is believe that currently amended claim 33 is patentable over the prior art cited and relied on.

Turning initially to the Sillen patent, there is shown a folding device for multi-sheet paper layers. It is initially noted that the Sillen patent is not disclosed as having a paper web drawn-in device. It is clear from a reading of Sillen that the pin carrier 17 is an endless belt, with a plurality of pins 19 along its length. It is also clear that the pin carrier 17 and its pins 19 are always in contact with the paper web as it passes through the Sillen folding device. This is an important distinction. In the present device, as recited in currently amended claim 33, the paper web draw-in device is used only during paper web draw-in. It is not used during press production.

In Sillen, the various pins 19 on the pin carrier 17 contract the paper web train at a feed roller 29 which is recited, in the English language translation of Sillen, as being "...provided at input end 13 of the back rail, right beside pin carrier 17." Currently amended claim 33 requires that the plurality of paper web trains are fastened to each other to form a paper web train before the fastened-together paper web train is drawn into the folding hopper inlet. Claim 33 also requires that the paper web draw-in device starts before the folding hopper inlet. Claim 33 additionally requires that the paper web holding device of the paper web draw-in device engage the fastened together paper web trains prior to the longitudinal folding hopper inlet.

It is clear that Sillen does not render the method recited in currently amended

claim 33 obvious. As indicated above, Sillen is not directed to a web draw-in device. The pins 19 on the pin carrier 17 are always in contact with the web as it passes through the folding machine. The pins 19 of Sillen are also used to transport the paper web along the back rail of the device. There is also no teaching, or suggestion in Sillen that the pins are usable to fasten the plurality of paper webs together to form a fastened-together paper web train. While Sillen discusses the penetration of the paper webs by the pins 19, there is no discussion of such a penetration of each paper web layer being effective to fasten the paper web layers together to form the fastened together paper web train. It is particularly clear that Sillen does not show or suggest such a fastening together in advance of the folding hopper inlet. The feed rollers 29, that acts as a backer, so that the pins 19 can penetrate the web layer, is recited as being at the input end 13 of the back rail.

The features of currently amended claim 33 of the subject application, which are not present in the Sillen reference are also not shown, or suggested in the secondary Pflaum reference. In Pflaum there is disclosed a web processing station that is located after a rotary printing machine. The processing station depicted in Fig. 2 includes a former 17 which is generally in the shape of a triangular plate.

Referring initially to Fig. 1, a plurality of printed tracks 1 are fed past either negatively charged electrodes 2 or across positively charged electrodes 3. The tracks there pass through a pair of unification rollers 4 and 5 before reaching cutting cylinders 7 and 8. It is further recited, with respect to Fig. 1 of Pflaum that the edges of the paper tracks 1 are given an electrostatic charge only as the areas of separation of the cut lengths, as determined by the transverse cutting device; i.e. the cutting cylinders 7 and 8.

Returning now to Fig. 2, there are shown three tracks of paper at 10, 11 and 12, which three tracks are passed by calendar rollers 13, 14 and 15. Each of these calendar rollers has, as seen in Fig. 3, spaced electrodes 26 and 27 on its outer end circumference. The section 28 of each cylinder between the electrodes 26 and 27 is an insulation material. It is clear that all of the rollers 13, 14 and 15 apply a positive charge to the left edges of the paper webs from all of the three tracks 10, 11 and 12. It is also clear that all of the rollers 13, 14 and 15 apply a negative charge to all of the right edges of all three of the paper tracks 10, 11 and 12. If anything, the application of like charges to superimposed web layers will act to repel the superimposed layers from each other, as the layers pass through the former 17. As discussed at page 12 of the English translation of Pflaum, the funnel intake rollers 18 and 19, which are located after the longitudinal fold former 17 are used to bring the left edges of the tracks 10, 11 and 12 into contact with the right edges of the tracks. At this point, which is clearly after the longitudinal fold former 17, the track edges come to rest upon each other and are then caused to adhere to each other by the different electrostatic charges. This adherence is used so that "...fluttering, bunching or similar wrinkling at the free corners of the folded and cut tracks 10, 11 and 12 can definitely be avoided in the following processing steps."

It is quite clear that Pflaum does not teach the fastening of the web edges together prior to entry into the longitudinal folding device. If anything, the Pflaum structure would cause the superimposed web edges, on either side of the paper webs entering into the longitudinal folding device to be repelled from each other. The left edges of all the webs are positively charged. The right edges of all of the webs are negatively charged. These charges cannot be used to fasten the plurality of paper webs

together, to form a fastened-together paper web train prior to entry of the web train into the longitudinal folding hopper inlet. Pflaum thus does not provide any of the teachings missing from Sillen.

The combination of Sillen and Pflaum would not result in the method for drawing in paper webs, as recited in currently amended claim 33. Sillen does not show a web draw-in device and does not show or suggest any fastening of a plurality of paper webs together, to form a fastened-together paper web train prior to a hopper inlet. Sillen also does not show a draw-in device that engages the fastened-together paper web train prior to the hopper inlet. Pflaum does not show any kind of web transport assembly or draw-in device for use with a fold forme and also does not show any mechanism or procedure for joining together plural paper webs prior to the passage of the paper webs through the fold former. It is thus believed that currently amended claim 33 is patentable over Sillen and Pflaum, taken either singly or in combination.

Claim 34, which is carried forward, is believed to also be allowable because it depends from believed allowable, currently amended claim 33. The secondary reference to Michalik, U.S. patent No. 5,503,379 does not show the teachings which are missing from Sillen and Pflaum. Accordingly, claim 34 is believed to be allowable.

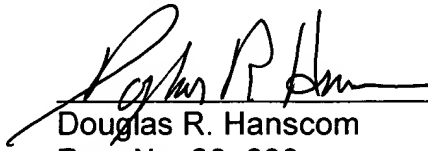
SUMMARY

Claim 33 has been amended and claim 34 has been cancelled. Claims 1-32 and 35-62 were previously cancelled. It is believed that the claims now pending in the subject U.S. patent application are patentable over the prior art references cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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